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CENTRAL INTELLIGENCE AGENCY

REPORT NO.

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COUNTRY

Hungary/Czechoslovakia/USSR

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SUBJECT

Adjustment of Freight Car Gauge

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SUPPLEMENT TO REPORT NO.

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After receipt of a short report that two Czech freight cars adjustable from Soviet to standard gauge were checked in the GYOER RR Car Factory (Hungary) after operating for 15,000 kilometers, the following special information was obtained:

## 1. Adjustable Car Axles

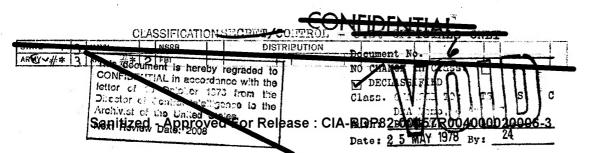
The two freight cars which were checked after a run of 15,000 kilometers in the GYOER Railroad Car Factory were of Czech origin. The control in GYOER was done on the basis of the attached technical drawings (Annexes 1 and 2). The manufacture of such freight car axles has not yet started in GYOER.

2. Freight car adjusting facilities at the Railroad Station of ZAHONY (Hungary).

a. Antecedents: The adjustment of the gauges performed on a slowly rolling freight car did not prove satisfactory since it led to a loosening of the wheel fixing devices which in turn led to excessive wear and tear of the wheel rims and caused dangerous vibrations at critical speeds. The brake units were also subject to a heavy wear and tear. To eliminate these detrimental results of the adjustment of freight cars, an adjusting plant — was established, in September 1948, at the CERNA MA TISOU (Slovak-Soviet border) border station. Here the adjusting process is accomplished on the standing freight car.

b. Order: The Railroad Car Factory in GYCER, in October 1948, was ordered by the Hungarian State Railways (HAV) to construct a gauge adjusting plant at the ZAHONY Railroad Station. This plant was to be completed by 10 March 1949. The required blueprints were forwarded with the order. (Annex 3).

c. Technical Data: The plant (Annexes 3 and 4) is usable for gauges of 1,435 and 2,000 mm and is 12 meters long. The adjustment of a car from Soviet to standard gauge and vice versa





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requires 10 minutes.

## Description of Adjusting Method:

- (1) The freight car set at standard gauge rolls to the gauge adjusting plant over pit A. A man posted in the pit operates a braking device which keeps the car in proper position.
- Four mechanics loosen the fastenings of the wheel wedges To avoid eneside tension, two treatles and the brake linkage. To avoid eneside tension, two trestles are connected with the slide rails whose classe are fastened to the wheels. This is cone by two other mechanics.
- (3) The slide rails are operated by a foreman by means of oil pressure cylinders, the two middle ones being designed as twin cylinders and pushed apart. Then the rails have reached the desired distance the compressor is automatically cut off. This plant is operated from a switch board in pit A. The maximum performance of the plant is 60 tons per axle. After performance of this operation the mechanics provisionally fasten the keys and screws of the brake linkage.
- (4) By means of a rope the freight car is pulled to pit B where the wheel wedges and brake linkage are definitely fastened and lubricated, if necessary. The freight car then leaves the gauge adjusting plant. The slide rails are brought back to their original position and can now receive the next car. Up to now two such justing plants have been established at the ZAHONY Railroad

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The mechanical details of the adjusting device as represented in the attached drawings seem credible, and it is well possible that the adjusting operations are performed in the described way. One fact, however, must be pointed out. In the report and the drawings, mention is made of an adjustment from 1,435 mm (standard gauge) to 2,000 mm. Since the Soviet gauge is only 1,524 mm, this difference must be clarified and a request for the information has been made. It appears that the previously applied procedure of exchanging the wheel sets has been superseded by the simplified operations described in the present report. There is no doubt that this procedure is still in an experimental stage. It remains to be seen whether the previously occurring deficiencies (loosening of wheel fastenings, premature wear and tear of wheel rims and brake units, occurrence of dangerous vibrations) will be eliminated by the adjusting method performed at the standing freight car.

It is also noteworthy that Hungary, although she herself does not yet produce adjustable freight cars or axios, established two adjusting plants at the ZAHONY border station. It may be assumed that this has been done by order of the coviets. This report shows that the method of adjusting freight cars by changing the locations of the wheels was developed in Czechoslovakia and that, so far, there only have adjustable cars been built. Until now, the existence of such gauge adjusting plants has been reported only for ZAHCHY, Hungary, and CERMA, Czechoslovakia.

## 4 Annexes:

- (1) Adjustable Axle of the Adjustable Freight Car (2) Brake System of the Freight Cars Adjustable from Standard to Soviet Gauge (3) Cross Section of the Adjustment Devices on the
- Freight Cars
- (4) Adjustment Devices for Freight Cars at the ZAHOHY Railroad Station.

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